

## **Supplementary Information**

### **“Engineering a Ribozyme Cleavage-induced Split Fluorescent Aptamer Complementation Assay”**

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\*These authors contributed equally.

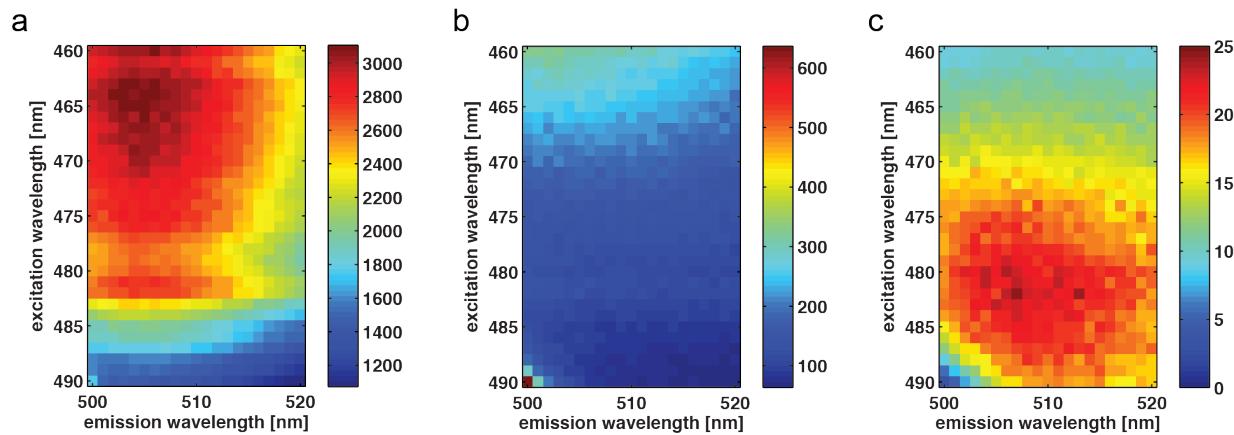
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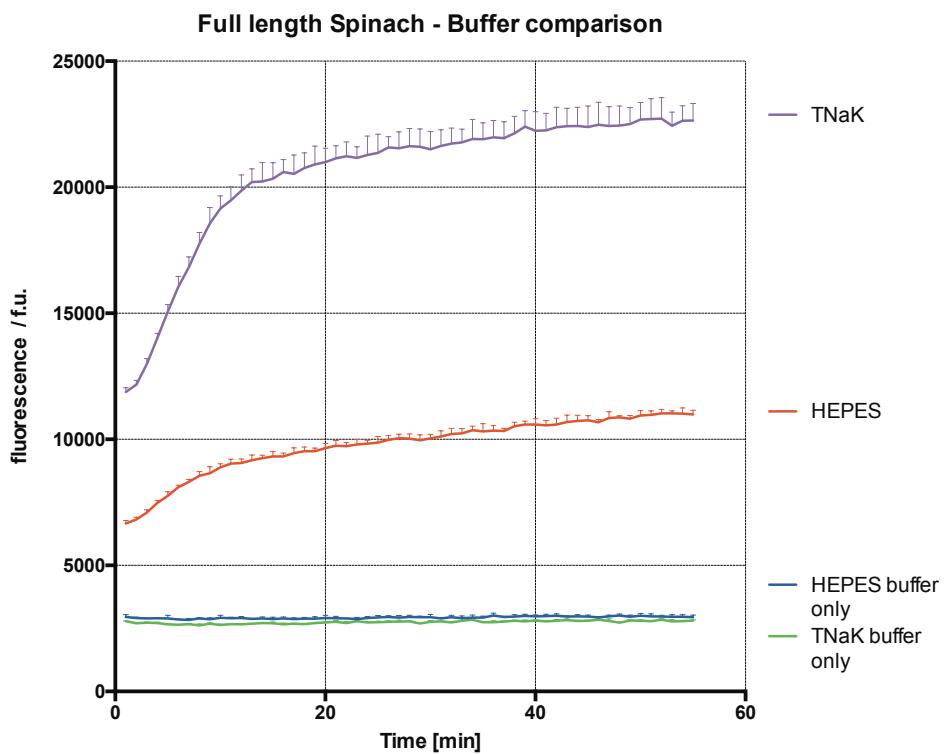
Supplementary Figures S1 and S3

Supplementary Table S1

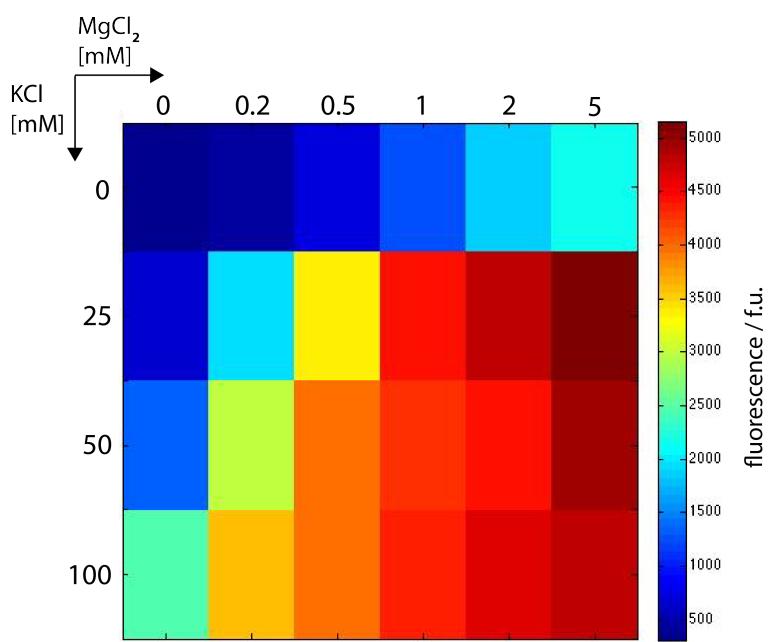
## Supplementary Figures



**Figure S1 | (a)** Excitation/emission wavelength scan of fluorescence intensities of 0.5  $\mu\text{M}$  split Spinach aptamer (SpA+SpB). **(b)** Excitation/emission wavelength scan of fluorescence intensities of 0.5  $\mu\text{M}$  SpB RNA showing background fluorescence. **(c)** Signal-to-background ratios of the values derived from (a) and (b).



**Figure S2 |** Fluorescence intensities of 1  $\mu$ M of full-length Spinach aptamer SpFL in TNaK or HEPES buffer. TNaK-buffer (20 mM Tris, 140 mM NaCl, 100 mM KCl, 5 mM MgCl<sub>2</sub>, 10  $\mu$ M DFHBI-1T, pH 7), HEPES buffer (40 mM HEPES, 100 mM KCl, 5 mM MgCl<sub>2</sub>, 10  $\mu$ M DFHBI-1T, pH 7.4).



**Figure S3 |** Fluorescence intensities of 1 μM of full-length Spinach aptamer SpFL at different  $\text{Mg}^{2+}$  and K<sup>+</sup> ion concentrations in TNaK buffer. Data are mean values of an endpoint measurement (90 min.) experiment.

**Table S1 | RNA oligonucleotide sequences**

Name	Sequence (5'-3')
SpA <sub>L</sub> -sTRSV <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGCUUUCGGGCUGACGAGGUCCGUGAGGACGAAACGUAUUUGG
SpA <sub>L</sub> -sTRSV <sub>inac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGCUUUCGGGCUGACGAGGUCCGUGAGGACGAGACGUAUUUGG
SpA <sub>M</sub> -sTRSV <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGCUUUCGGGCUGACGAGGUCCGUGAGGACGAAACGCAUUUGG
SpA <sub>M</sub> -sTRSV <sub>inac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGCUUUCGGGCUGACGAGGUCCGUGAGGACGAGACGCAUUUGG
SpA <sub>H</sub> -sTRSV <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGCUUUCGGGCUGACGAGGUCCGUGAGGACGAAACGCACUGG
SpA <sub>H</sub> -sTRSV <sub>inac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGCUUUCGGGCUGACGAGGUCCGUGAGGACGAGACGCACUGG
SpFL	GGGGAGAAGGACGGGUCCAGUGCAGAACACGCACUGUUGAGUAGAGUGUGAGCUCCCUGG
SpA	GGGGAGAAGGACGGGUCCAGUGC
SpB	GCGCACUGUUGAGUAGAGUGUGAGCUCCCUGG
SpA <sub>H</sub> -Env140 <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCGGGGCUGGACCGCCCCCUGACGAGGCCGCGGAGGGCCAAACGCACUGG
SpA <sub>H</sub> -Env140 <sub>inac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCGGGGCUGGACCGCCCCCUGACGAGGCCGCGGAGGGCCAGACGCACUGG
SpA <sub>H</sub> -Env140-C3 <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCGGGGCUGAAUCGCCCGCUGACGAGCCCUGAAAAAGGGCGAAACGCACUGG
SpA <sub>H</sub> -Env140-H1 <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCGGGGCUCCCCCUGCCCCCUGACGAGCCCUGAAAAAGGGCGAAACGCACUGG
SpA <sub>H</sub> -sTRSV-L1.3 <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGGGCUUUCGGGCUGACGAGGUCCGUGAGGACGAAACGCACUGG
SpA <sub>H</sub> -sTRSV-L1.5 <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGUUUCGGGCUGACGAGGUCCGUGAGGACGAAACGCACUGG
SpA <sub>H</sub> -sTRSV-L1.6 <sub>ac</sub>	GGGGAGAAGGACGGGUCCAGUGCUGCGUCCCCGGAUGUGCCUUCGGGCUGACGAGGUCCGUGAGGACGAAACGCACUGG